

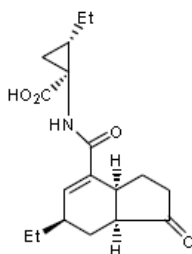
Product Specification Sheet

□ Cat. CTN11-1

Coronatine (COR) from *P. syringae* pv. *Glycinea*, purified

SIZE: 1 mg

Coronatine (COR) is a polyketide phytotoxin produced by several members of the *Pseudomonas aeruginosa* group of pathogens. The structure of COR has two distinct components: the polyketide coronafacic acid (CFA) and coronamic acid (CMA), an ethylcyclopropyl amino acid derived from isoleucine. The primary symptom elicited by COR is a diffuse chlorosis that can be induced on a wide variety of plant species. The reaction of *Arabidopsis thaliana* to exogenously applied COR is atypical; instead of chlorosis, anthocyanins accumulate at the site of inoculation and the tissue develops a strong purple hue. COR is also known to induce hypertrophy, to inhibit root elongation, and to stimulate ethylene production. COR is reported to induce several changes in tomato tissue. For example, the epidermal wall was significantly thicker and the chloroplasts stained more intensively and were smaller. One of the most pronounced effects was the appearance of proteinase inhibitors. Striking structural and functional homologies between COR, methyl jasmonate, and 12-oxo-phytodienoic acid suggest that COR mimics the octadecanoid signaling molecules of higher plants.



Mol wt 319.4
Formula C₁₈H₂₅NO₄
Purity >95%
Synonyms: COR; Cyclopropanecarboxylic acid, 2-ethyl-1-[[[6-ethyl-2,3,3a,6,7a-hexahydro-1-oxo-1H-inden-4-yl)carbonyl] amino]

Form & Storage

Coronatine is supplied as lyophilized powder. Coronatine is soluble in methanol (20 mg/ml), DMSO (20 mg/ml), and in water (0.2 mg/ml).

The supplied unopened vial is stable for 2 years if stored at -20 °C. A solution at 0.2 mg/ml in water, methanol, or DMSO is stable for 2 years at -20 °C (as determined by HPLC).

Storage

Short-term: unopened, undiluted liquid vials at -200C..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

General References: (1) Bender CL (1989) J. Bacteriol. 171, 807-812; Palmer DA (1993) Appl. Environ. Microbiol. 59, 1619-1626; Bender CI (1999) Mol. Biol. Rev. 63, 266-292

*This product is for in vitro research use only.

CTN11-1- *P. syringae*

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India Contact:

Life Technologies (India) Pvt. Ltd.

306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi - 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com